

**DEPARTMENT OF COMMERCE**

**AERONAUTICS BRANCH**

---

**AERONAUTICS BULLETIN No. 7**

**AIR COMMERCE REGULATIONS**

---

**Effective December 31, 1926**

---

**Effective as amended September 1, 1929**



**UNITED STATES  
GOVERNMENT PRINTING OFFICE  
WASHINGTON: 1929**

## CONTENTS

---

|  |           |
|--|-----------|
| <b>Chapter 1. Licensing of aircraft .....</b>                      | <b>1</b>  |
| <b>Chapter 2. Inspection of aircraft .....</b>                     | <b>7</b>  |
| <b>Chapter 3. Operation of aircraft.....</b>                       | <b>9</b>  |
| <b>Chapter 4. Marking of licensed and unlicensed aircraft.....</b> | <b>11</b> |
| <b>Chapter 5. Licensing of pilots .....</b>                        | <b>13</b> |
| <b>Chapter 6. Licensing of mechanics .....</b>                     | <b>19</b> |
| <b>Chapter 7. Air-traffic rules.....</b>                           | <b>21</b> |
| <b>Chapter 8. Miscellaneous .....</b>                              | <b>25</b> |

## **AIR-COMMERCE REGULATIONS**

### **CHAPTER I. GENERAL**

#### **LICENSING OF AIRCRAFT**

##### **Section 1. Licensing Law.**

“ ‘ Air commerce ’ means transportation in whole or in part by aircraft of persons or property for hire, navigation of aircraft in furtherance of a business, or navigation of aircraft from one place to another for operation in the conduct of a business.” (Sec. 1, air-commerce act of 1926.)

“ ‘ Interstate or foreign air commerce ’ means air commerce between any State, Territory or possession, or the District of Columbia, and any place outside thereof; or between points within the same State, Territory or possession, or the District of Columbia, but through the air space over any place outside thereof; or wholly within the air space over any Territory or possession or the District of Columbia.” (Sec. 1.)

“The Secretary of Commerce shall by regulation \* \* \* provide for the granting of registration to aircraft eligible for registration if the owner requests such registration \* \* \*.” (Sec. 3 (a).)

“It shall be unlawful \* \* \* to navigate any aircraft \* \* \* in interstate or foreign air commerce unless such aircraft is registered as an aircraft of the United States.” (Sec. 11(a) (2).)

“To navigate any aircraft registered as an aircraft of the United States \* \* \* without an aircraft certificate or in violation of the terms of any such certificate.” (Sec. 11 (a) (3).)

“Any person who (1) violates any provision of subdivision (a) of this section \* \* \* shall be subject to a civil penalty of \$500 \* \* \* .” (Sec. 11 (b).)

Aircraft means “any contrivance now known or hereafter invented, used, or designed for navigation of or flight in the air, except a parachute or other contrivance designed for such navigation but used primarily as safety equipment.” (Sec. 9 (c).)

Aircraft of the United States means, “any aircraft registered” under the Air Commerce Act. (Sec. 9 (f).)

##### **Sec. 2. Application of the Law.**

Aircraft must be licensed before engaging in—

(A) Carrying persons or property for hire, or the United States mails—

(1) Between two or more States, or to or from foreign countries, as from Chicago to Cleveland, Ohio, or from New York to Portland, ME., to Montreal, Canada.

(2) Between two points in one State if a part of the flight is over another State, as from Buffalo to New York via Susquehanna, Pa.; or from Buffalo, thence over any part of Pennsylvania, and thence back to Buffalo.

(3) Between two points in one State if it is a part of a through carriage between points in different States, or countries, as from Los Angeles to San Francisco, Calif., as a part of the carriage between Los Angeles and Seattle, Wash., or from San Antonio, Tex., to Laredo, Tex., as a part of the carriage between San Antonio and Monterey, Mexico.

(4) Within the air space over the District of Columbia or any Territory or possession of the United States.

(5) Flying between points in different states of the United States, the District of Columbia, or Territories or possessions of the United States, or to or from any foreign country, for the operation in the conduct or furtherance of a business, as where the aircraft is used in a business in one State, Territory, or possession of the United States, or the District of Columbia, and is flown to another State, Territory, or possession for use in the business in that State, Territory, or possession. Applied to concrete facts, it includes the aircraft which is used in State A for exhibition purposes or for the carriage there of persons or property for hire and is flown to State B for exhibition purposes or for the carriage there of persons or property for hire. It also includes interstate flights with advertising matter painted or displayed on the plane. It also includes carrying executives or employees of a company on interstate flights in behalf of the company’s business.

(B) Aircraft used solely for pleasure or noncommercial purpose need not be licensed, although

engaged in flying between States, but, at the option of the owner, may be licensed, in which event it must observe all the requirements of licensed aircraft. Whether licensed or not, all aircraft must display the assigned identification mark.

### **Sec. 3. Aircraft Belonging to the United States.**

Aircraft belonging to the United States will be licensed by the Secretary of Commerce if the operating agency so requests.

### **Sec. 4. Aircraft Belonging to States, etc.**

Aircraft belonging to States, Territories, or possessions of the United States, or to political subdivisions thereof, will be licensed by the Secretary of Commerce and rated as to airworthiness in the same manner as other craft if request for licensing is made and such aircraft are used exclusively in the governmental service.

### **Sec. 5. Foreign Aircraft.**

(A) Where civil aircraft of the United States are permitted to fly in or over a foreign country without registration and rating and licensing of their airmen in such foreign country, the registered aircraft of such foreign country, not a part of its armed forces, and the licensed airmen serving in connection therewith may operate in the territory over which the United States has jurisdiction without registration and a license issued by the Department of Commerce of the United States. Such foreign aircraft shall not engage in interstate or intrastate air commerce and must observe the air-traffic rules. Prior to any flight over the United States or the territory under its jurisdiction, the Secretary of Commerce shall be notified in writing of the owner's name and address and the registration marks displayed on such aircraft and purpose of flight.

(B) Aircraft owned by resident aliens will be granted identification marks but shall not engage in interstate or intrastate air commerce.

(C) Registered aircraft of the United States shall not be flown or operated in air commerce in the United States or its possessions for or in behalf of any individual, partnership, firm, or corporation not eligible to license for such registered aircraft.

### **Sec. 6. Requisites of Licensing and Registration.**

An aircraft to be entitled to license and registry must be airworthy and equipped in accordance with requirements of the Secretary of Commerce, shall not be registered under the laws of any foreign country, and shall be owned by—

(A) A citizen of the United States.

(B) A partnership of which each member is a citizen of the United States; or

(C) A corporation organized under the laws of the United States, a State, Territory, or possession of the United States, and of which the president and at least two-thirds of the directors or managing officers are citizens of the United States, and of which at least 51 percent of the voting interest in the corporation is controlled by citizens of the United States; or

(D) The Government of the United States, a State, Territory, or possession, or a political subdivision thereof.

### **Sec. 7. Registration, Meaning of.**

Registration means entry of licensed aircraft in an official license registry of the Secretary of Commerce as aircraft of the United States. Unlicensed aircraft though entered of record for purposes of identification as required by law, are not registered aircraft within the meaning of these regulations.

### **Sec. 8 Airworthiness, Law of.**

"The Secretary of Commerce shall by regulation \* \* \* provide for the rating of aircraft of the United States as to their airworthiness \* \* \* . The Secretary may from time to time, rerate aircraft as to their airworthiness upon the basis of information obtained under this subdivision." (Sec. 3 (b).)

"It shall be unlawful \* \* \* to navigate any aircraft registered as an aircraft of the United States without an aircraft certificate or in violation of the terms of any such certificate." (Sec. 11 (a) (3).)

"Any person who violates any provision of subdivision (a) of this section \* \* \* shall be subject to a civil penalty of \$500." (Sec. 11 (b).)

### **Sec. 9. Airworthiness, Meaning of.**

Airworthiness means conformity with requirements prescribed or deviations therefrom approved by the Assistant Secretary of Commerce for Aeronautics.

Note. —See Airworthiness Requirements (Aeronautics Bulletin No. 7-A) for airworthiness requirements prescribed by the Assistant Secretary of Commerce for Aeronautics.

### **Sec. 10. Manufacturer's Identification Data.**

(1) The date of manufacture or date of remodeling and the name of the manufacturer or remodeler, together with the manufacturer's serial number and type of engine, must be permanently affixed in a visible location by means of a metal plate in the pilot's cockpit or compartment of each airplane in order that it may be distinguished from all other aircraft

(2) The following specification shall be stenciled or otherwise displayed on the outside of the fuselage or cabin at a point adjacent to the entrance into the cockpit or cabin in such manner as to be readily visible and legible to persons proposing to enter the same: Weight empty; useful load; gross weight; maximum passengers authorized less crew.

(3) Upon airplanes manufactured under an approved type certificate the manufacturer thereof may display the insignia shown herewith, in conjunction with the above data required to be stenciled on the airplane.

**DOE AIRCRAFT MFG. CO., INC.**



Gross weight .....Pounds  
Weight empty .....Pounds  
Useful load .....Pounds  
Maximum passengers authorized (less crew)...Persons

The insignia, if used, shall be identical with that shown, except that the name of the manufacturer shall appear above it in the manner indicated, and the number of the approved type of certificate under which the identical airplane was manufactured shall appear in the circle thereof. The data shall appear under it in the manner shown. This insignia shall only be used on airplanes for which application for license has been made, or for which license has been issued, and must be obliterated in the event the airplane is subsequently disapproved for license.

### **Sec. 11. Approved Type Certificate, Requirements for.**

(A) APPLICATION. —A manufacturer of airplanes, engines, or propellers in quantities and of an exact similarity of type, structure, materials, assembly, and workmanship may, at the option of the manufacturer, file with the Secretary of Commerce an application under oath for an approved type certificate accompanied by the data specified in Airworthiness Requirements (Aeronautics Bulletin No. 7-A), in duplicate. The design or test data must bear the signature of the responsible engineer and will be treated as confidential.

(B) CONSTRUCTION UNDER APPROVED TYPE CERTIFICATE. —The approved type certificate will be issued upon the condition that on January 1 and July 1 of each year the manufacturer will file his affidavit with the Secretary of Commerce, showing the number of airplanes, engines, or propellers constructed under the approved type certificate during the six months immediately preceding the filing of the report, with a statement that no airplane, engine, or propeller is being constructed, under such certificate, deviating from the terms thereof.

### **Sec. 12. Application for Aircraft License.**

Before an aircraft license will be issued the owner must file, under oath, with the Secretary of Commerce an application for the license upon blanks provided by the Secretary of Commerce. Copies thereof will be forwarded upon request.

### **Sec. 13. Licensing and Expediting the Licensing of Approved Type Airplanes.**

(A) For the purpose of expediting the licensing of airplanes constructed under approved type certificates and in the original possession of the manufacturer or dealer, the following provisions may be invoked, at the

option of the manufacturer or dealer. The manufacturer or dealer may present the manufacturer's affidavit showing that the aircraft is exactly similar to the specimen of the approved type and have the airplane flight tested, as prescribed in Airworthiness Requirements (Aeronautics Bulletin No. 7-A). If the flight tests are passed and the aircraft inspector finds that the airplane is exactly similar to the specimen, a flight certificate will be issued for such airplane, good for 90 days after date and renewable for 90-day periods upon findings of the Secretary of Commerce that the airplane is in substantially the same condition as when the original certificate was issued. The manufacturer's affidavit and the flight certificate may be delivered to any purchaser and will be given such effect as is provided therefor in paragraph (B) of this section.

(B) An airplane constructed under an approved type certificate and owned by an eligible owner of aircraft of the United States will be licensed as follows:

(1) If the application is accompanied by the manufacturer's affidavit, the airplane will be inspected for similarity to the specimen and will be given the flight test prescribed in Airworthiness Requirements (Aeronautics Bulletin No. 7-A). If such inspections and tests are passed and the airplane is found to be equipped as required by these regulations, it will be licensed.

(2) If the application is accompanied by both the manufacturer's affidavit and a valid flight certificate, it will be licensed if found to be equipped as required by these regulations.

(3) If the application is not accompanied by the manufacturer's affidavit and the flight certificate, it will be licensed under the provision of section 14 hereof.

#### **Sec. 14. Licensing of Airplanes Not Constructed Under Approved Type Certificates.**

(A) For an airplane constructed after October 1, 1927, and not manufactured under approved type certificate, the application for the license must be accompanied by the information specified in the requirements for approved type certificate.

(B) TESTS. —(1) For an airplane constructed after October 1, 1927, in conformity to the airworthiness requirements of these regulations and which passes the flight tests specified in Airworthiness Requirements (Aeronautics Bulletin No. 7-A), an aircraft license will be issued by the Secretary of Commerce.

(2) For airplanes constructed prior to October 1, 1927, and found by the Secretary of Commerce to be of proper design, assembly, and workmanship, and of suitable materials and equipped in accordance with these regulations, aircraft licenses will be issued after such airplanes have passed the flight tests specified in Airworthiness Requirements (Aeronautics Bulletin No. 7-A).

#### **Sec. 15. Licensing of Special Classes of Airplanes.**

Racing and experimental airplanes and airplanes of unusual design will be granted special aircraft licenses, and other aircraft may be specially licensed for other purposes and shall be operated only in accordance with the conditions specified in such licenses.

#### **Sec. 16. Places for Airworthiness Tests.**

The Secretary of Commerce will fix the time and place for all inspections and tests for airworthiness.

#### **Sec. 17. Licenses—Contents.**

Aircraft licenses will be issued for a period of not exceeding one year and will be granted subject to compliance with these regulations.

#### **Sec. 18. Sale of Licensed Aircraft.**

On the date of sale or transfer of title of licensed aircraft, the recorded owner shall report in writing to the Aeronautics Branch, Department of Commerce, Washington, D.C., giving the date and place of sale or transfer and the name and residence of the purchaser. The recorded owner shall execute the transfer portion of the record, transfer, and reassignment form and deliver same to the purchaser. The purchaser shall execute the application for reassignment portion of the record, transfer, and reassignment form and deliver the same to the Aeronautics Branch, Department of Commerce. If the purchaser meets the citizenship requirement for holding airplane license under section 6, air commerce regulations, the airplane may be operated under the Department of Commerce number already assigned, in accordance with the terms of the license issued former owner, for a period of 60 days from date of mailing to the Aeronautics Branch or delivery in person to its authorized representative of the reassignment form.

Experimentally licensed aircraft are excepted from provision above permitting operation for 60 days after record, transfer, and reassignment form is mailed. Specific authority must be secured from the Department of Commerce before operation of an experimentally licensed plane by a purchaser.

Between the date of sale and the posting in the mails, or delivery in person to an authorized representative of the Aeronautics Branch, Department of Commerce, of the record, transfer, and reassignment form properly executed, the aircraft is considered unlicensed and unidentified, and the operation thereof constitutes a violation of these regulations.

No transfer of title will be made on the records of the Department of Commerce until the forms required by these regulations, properly executed, are received by this department.

## **DEFINITION OF OWNERSHIP**

Recorded owner is the individual, partnership, company, or corporation that has presented to the Aeronautics Branch, Department of Commerce, evidence of ownership acceptable for the purpose of licensing.

### **Sec. 19. Relicensing of Aircraft.**

Upon the expiration of the term of an existing aircraft license the aircraft will be relicensed for additional periods of not exceeding one year upon the application of the recorded owner for relicensing and the finding of the Secretary of Commerce that the aircraft is airworthy and is owned by an eligible owner. It is the responsibility of the recorded owner to make contact with an inspector of this department prior to the expiration of the aircraft license for the purpose of reinspection of the aircraft.

### **Sec. 20. Display and Surrender of License.**

The aircraft license must be carried in the aircraft whenever it is in service and must be conspicuously posted where it may be readily seen by passengers or inspectors. Whenever the craft is unairworthy, and when the license is suspended or revoked, or when it is no longer in force, the license shall be surrendered to the Secretary of Commerce. The license must be presented for inspection upon the demand of any passenger or of any authorized official or employee of the Department of Commerce or State or municipal officials charged with enforcing local regulations or laws involving Federal compliance.

### **Sec. 21. Licensing of Airships and Balloons.**

Until otherwise provided by regulations, the licensing of airships and balloons shall be in accordance with special orders of the Secretary of Commerce.

### **Sec. 22. Meaning of Airplane.**

Except as otherwise specifically shown, the word "airplane" as used in this chapter includes seaplane or any combination of landplane, seaplane, or boat.

### **Sec. 23. Canceling Licenses Upon Request.**

Upon the request of the recorded owner of the aircraft license and upon the request of the manufacturer the approved type certificate will be canceled by the Secretary of Commerce.

### **Sec. 24. Revocation and Suspension of Licenses—Law.**

"The Secretary of Commerce shall by regulation \* \* \* provide for the \* \* \* suspension and revocation of registration (and) aircraft certificates." (Sec. 3 (f).)

### **Sec. 25. Ground for Revocation or Suspension.**

Aircraft licenses and/or approved type certificates will be suspended or revoked for—

- (A) Violating the air-commerce act or any of these regulations.
- (B) Failing to make proper and seasonable reports
- (C) Making a false statement in application or information accompanying the application for the license or in any report required under these regulations.
- (D) Equipping the airplane with a type of engine not specified in the license or approved by the Secretary of Commerce.
- (E) Remodeling the engine and using it to propel licensed aircraft without the aircraft having been first rerated as airworthy by the Secretary of Commerce
- (F) Remodeling the airplane structure and flying the airplane without having it first rerated as airworthy by the Secretary of Commerce.

- (G) Operating the airplane in excess of the authorized useful load specified in the license.
- (H) Operating with passengers in excess of the number authorized in the aircraft license. Infants under 2 years of age are excepted, provided the maximum allowable useful load is not exceeded.
- (I) Using or displaying license for fraudulent purpose and/or misrepresenting any product for which an approved type certificate has been issued.
- (J) Using or displaying license in any manner contrary to the public safety or interest.
- (K) The aircraft license is automatically revoked upon the aircraft being removed from the continental limits of the United States for the purpose of engaging in air navigation wholly within a foreign country without the prior approval of the Secretary of Commerce.
- (L) Equipping aircraft with the type of propeller(s) which will permit the rated revolutions per minute of engine to be exceeded by more than the allowable excess specified by the engine manufacturer which in no case shall be more than 5 per cent in level flight.



## **CHAPTER 2**

### **INSPECTION OF AIRCRAFT**

#### **Sec. 26. Continuous Duty as to Flying Condition.**

After an aircraft is licensed, and between the times that it is inspected for airworthiness by an inspector, the owner is charged with the continuous duty of maintaining the aircraft in a good and proper state of repair and flying condition. For violation of this duty or of the inspections required in the next succeeding section the aircraft license will be suspended or revoked.

#### **Sec. 27. Daily and Periodic Inspections.**

(A) It is the responsibility of the recorded owner that licensed aircraft shall be given a line inspection by a licensed airman at least once within each 24 hours preceding flight, and the result thereof shall be entered in the log under the signature of the person making such inspection. The line inspection must be made to ascertain the working condition and state of repair of the—

- (1) Open control wires, all control wires and pulleys open to inspection through apertures, and all hinges on control surfaces.
- (2) Landing gear, wheels, fittings, and shock absorbers.
- (3) Fuselage parts open to visual inspection.
- (4) Main plane external bracing, including fittings and struts, external wires, cables, turnbuckles, and fabric or covering.
- (5) Control surface fabric or covering.
- (6) Engine-exhaust manifolds and exhaust-pipe extensions. The engine shall be given a warming-up test, during which the proper functioning of the engine instruments shall be ascertained.
- (7) Carburetors and fuel-feed lines open to visual inspection to insure proper functioning.
- (8) Cooling system and connections.
- (9) Cowling, to insure that the cowlings are properly secured and safe tied.
- (10) Propellers, as to condition.

(B) After each 100 hours of flight the aircraft must be given a “periodic inspection” by a licensed mechanic, and the result thereof must be entered in the log by the person making such inspection. This inspection must be made to ascertain the working condition and state of repair of the—

- (1) Engine installation.
- (2) Control systems throughout.
- (3) Propeller alignment.
- (4) Fuselage, including fittings, tail skid, and tail-skid shock absorbers.
- (5) All items specified in (A) above.

#### **Sec. 28. Government Inspection.**

The inspector or other authorized officer of the Secretary of Commerce shall be permitted by the owner, operating agency, or pilot to inspect the licensed aircraft at any time and place for the purpose of determining its flying condition and state of repair. For such purposes the owner, operating agency, or pilot shall give to such inspector or officer free and uninterrupted access to the aircraft and the field or shelter where the craft is located.

## **CHAPTER 3**

### **OPERATION OF AIRCRAFT**

#### **Sec. 29. Accident Reports.**

Where serious injury to person or property is suffered or death results in operating licensed aircraft the recorded owner and/or pilot of such aircraft shall immediately report, by telegraph or telephone, to the Secretary of Commerce the license number or identification number of the aircraft and the time and place of the accident. All accidents in the operation of licensed aircraft which result in injury to the aircraft shall be reported by the recorded owner and/or pilot without delay on the form provided for that purpose.

#### **Sec. 30. Flying Damaged Aircraft.**

(A) A licensed aircraft which is slightly damaged but not damaged to such an extent as to come within the meaning of section 31B must not be flown with passengers for hire until it has been fully repaired and such repairs approved by a licensed mechanic. The repair and approval must be noted in the airplane log, together with the signature of the mechanic involved.

(B) A licensed aircraft which is seriously damaged, must not be flown with passengers for hire until it has been fully repaired in accordance with section 31 below and the repairs approved by a Department of Commerce inspector.

#### **Sec. 31. Repair and Reconstruction of Licensed Aircraft.**

(A) When a licensed aircraft or major component thereof, such as the fuselage, the empennage, the control system, a wing, or a landing gear, has been damaged to a greater extent than 50 per cent, in the opinion of the inspector for the Aeronautics Branch, Department of Commerce, the rebuilder will be required to submit to the department in duplicate drawings and stress analysis of the parts to be rebuilt or repaired. If these drawings and stress analysis are approved by the department, the repairs shall be made in accordance with such approved drawings and analysis, and the rebuilder shall furnish the inspector for the department making the final inspection a statement under oath that repairs have been made in accordance with such approved drawings.

(B) When a licensed aircraft or major component thereof, such as the fuselage, the empennage, the control system, a wing, or a landing gear, has been damaged to a less extent than 50 per cent, in the judgment of the inspector, but is classed by him as a major repair, the rebuilder will be required to submit to the department a drawing or drawings of the parts to be rebuilt or repaired showing clearly the dimensions, sizes, and materials to be used in the rebuilt or repaired members. If the drawings are approved by the department, they will be returned to the inspector for his guidance during the inspection. The rebuilder will furnish the inspector for the department making the final inspection a statement under oath that repairs have been made in accordance with such approved drawings.

(C) The requirements stated above in paragraphs A or B shall not apply when the repair has been made by the original manufacturer of such aircraft or when factory parts supplied by the original manufacturer of such aircraft have been used in the repair of any component, providing such repair is made in accordance with the original design and specifications.

(D) The requirements stated above in paragraphs A or B shall not apply when the repair has been made by an approved repair station, provided such repair is in accordance with the original design and specifications.

(E) In order for a repair station to engage in the repair of licensed aircraft as an approved repair station, the repair equipment, shop facilities, and personnel shall meet with the approval of the Department of Commerce. In addition, they shall furnish suitable evidence from the manufacturers of the aircraft they propose to repair indicating that the manufacturer has authorized the repair station to make repairs on their product and that the repair station has been furnished with the necessary engineering data to satisfactorily repair such aircraft.

#### **Sec. 32. Solo Flights With Passenger Planes.**

In addition to the requirements of Airworthiness Requirements (Aeronautics Bulletin No. 7-A), licensed airplanes with newly installed engines—old, new, or reconditioned—and airplanes upon which major repairs have been made to the plane structure must be first test flown by a licensed pilot before carrying

passengers for hire.

**Sec. 33. Carrying Passengers at Night.**

Licensed aircraft, when engaged in carrying passengers for hire any time between one-half hour after sunset and one-half hour before sunrise, must be equipped with electric landing lights in addition to the navigation lights required in section 76.

**Sec. 34. Supplies and Equipment for Flights Over Water.**

An aircraft flying over large bodies of water must be provided with an adequate supply of food and potable water, and, if engaged in carrying passengers for hire, it must be equipped with a Very's pistol or approved equivalent and life preservers or other flotation devices approved by the Secretary of Commerce.

**Sec. 35. Logs and Navigation Reports.**

The owner of every licensed aircraft shall keep a navigation and engine log book and shall on the 1<sup>st</sup> day of January and July of each year transmit to the Secretary of Commerce a navigation summary report, in duplicate, showing the number of hours and the approximate number of miles the aircraft has been flown during the six months immediately preceding rendering the report, the duration of the use of each engine, the engine installation and repairs, and the plane structure and rigging changes and repairs.

The log books shall be carried in the aircraft at all times when such aircraft is away from its home airport.

**Sec. 36. Foreign Air Commerce.**

The entry and clearance of aircraft into or from the United States shall be in compliance with the Entry and Clearance of Aircraft Regulations (Aeronautics Bulletin No. 7-C).

## CHAPTER 4

### MARKING OF LICENSED AND UNLICENSED AIRCRAFT

#### **Sec. 37. Marking of Aircraft, Law of.**

“The Secretary of Commerce shall by regulation \* \* \* establish air traffic rules for the \* \* \* identification of aircraft \* \* \* .” (Sec. 3 (e).)

#### **Sec. 38. Identification Marks for Government Aircraft.**

For aircraft belonging to the Government of the United States identification marks or symbols will be assigned in accordance with arrangements to be made with the affected departments.

#### **Sec. 39. Identification Marks for Licensed Aircraft.**

A licensed aircraft shall bear an identification mark consisting of the license number of the aircraft preceded by—

The Roman capital letter S (meaning State) for aircraft used solely for governmental purposes and belonging to States, Territories, possessions, or political subdivisions thereof.

Licensed airplanes engaged in racing or experimental work or specially licensed for other purposes will be assigned special identification numbers or symbols.

The Roman capital letter C for all other commercially licensed aircraft.

Aircraft not licensed, but eligible and for which application for license has been filed with the Secretary of Commerce, will be assigned only a temporary number pending the issuance of license.

The letter N must precede the license symbol and numerals on licensed aircraft engaged in foreign air commerce and, at the option of the owner, may precede it on other licensed aircraft, provided that aircraft licensed for experimental purposes shall not display the letter N.

The identification mark will be assigned to licensed aircraft when the aircraft license is issued and a separate application is not required.

#### **Sec. 40. Identification Marks for Unlicensed Aircraft.**

(A) Unlicensed aircraft must display, when in flight, an identification mark assigned by the Secretary of Commerce. The mark will be assigned upon the application of the aircraft owner and must be permanently affixed to the aircraft. It will consist of a number only. The nationality mark shall not be made a part of it, nor shall any other letter, design, symbol, or description be added thereto.

(B) On the date of sale or transfer of title of unlicensed, identified aircraft the recorded owner shall report in writing to the Aeronautics Branch, Department of Commerce, Washington, D. C., giving the date and place of sale or transfer and the name and residence of the purchaser. The recorded owner shall execute the transfer portion of the record, transfer, and reassignment form, and deliver same to the purchaser. The purchaser shall execute the application for reassignment portion of the record, transfer, and reassignment form and deliver the same to the Aeronautics Branch, Department of Commerce. The airplane may be operated under the Department of Commerce number already assigned, in accordance with the terms of the unlicensed identification mark issued former owner, for a period of 60 days from date of mailing to the Aeronautics Branch, or delivery in person to its authorized representative of the reassignment form.

Between the date of sale and the posting in the mails, or delivery in person to an authorized representative of the Aeronautics Branch, Department of Commerce, of the record, transfer, and reassignment form properly executed, the aircraft is considered unlicensed and unidentified, and the operation thereof constitutes a violation of these regulations.

No transfer of title will be made on the records of the Department of Commerce until the forms required by these regulations, properly executed, are received by this department.

### DEFINITION OF OWNERSHIP

Recorded owner is the individual, partnership, company, or corporation that has presented to the Aeronautics Branch, Department of Commerce, evidence of ownership acceptable for the purpose of assigning unlicensed identification marks.

#### **Sec. 41. Places and Dimensions of Marks.**

Identification marks shall be located as follows:

(A) ON AIRPLANES. —On the lower surface of the lower left wing and the upper surface of the upper right wing, the top of the letters or figures to be toward the leading edge, the height to be at least four-fifths of the mean chord; provided, however, that in the event four-fifths of the mean chord is more than 30 inches the height of the letters and figures need not be more but shall not be less than 30 inches. If the lower left plane is less than one-half the span of the upper left plane the letters or figures thus described shall be on the under surface of the upper left plane, as far to the left as is possible. In the case of a monoplane the mark shall be displayed on the lower surface of the left wing and the upper surface of the right wing in the manner thus described. The marks shall also appear on both sides of the rudder, of size as large as the surface will permit, leaving a margin of at least 2 inches.

(B) ON AIRSHIPS. —On both sides near the maximum cross section and on the lower undersurface of the nose, the height to be equal to at least one-twelfth of the circumference at the maximum transverse cross section of the airship, but it need not exceed 8 feet.

(C) ON BALLOONS. —Twice, near the maximum horizontal circumference, as far as possible from one another, the height to be equal to at least one-twelfth of the circumference of the balloon, but it need not exceed 8 feet.

(D) The width of the letters and figures of all marks shall be at least two-thirds of the height and the width of the stroke shall be at least one-sixth of the height. The letters and figures shall be painted in plain black type on a white background or in any color on any background, but there must be a strong contrast between the two. The letters and numbers must be uniform in shape and size. A space equal to at least one-half of the width of a letter shall be left between each figure or letter.

#### **Sec. 42. Other Symbols and Marks.**

Except with the approval of the Secretary of Commerce, no design, mark, character, symbol, or description shall be placed upon aircraft if said design, etc., modifies, adds to, or subtracts from or confuses the assigned mark or impairs or destroys its visibility.

#### **Sec. 43. Requirement for Displaying Identification Marks.**

All aircraft in flight, whether licensed or unlicensed, must display license or identification mark issued by this department. This applies to all flights, whether for hire or for pleasure, test purposes, experimental purposes, and whether aircraft is licensed or unlicensed. It also applies to all aircraft as defined in section 1 of these regulations.

## CHAPTER 5

### LICENSING OF PILOTS

#### **Sec. 44. Pilots, Law of.**

“The Secretary of Commerce shall by regulation \* \* \* provide for the periodic examination and rating of airmen serving in connection with aircraft of the United States as to their qualifications for such service.” (Sec. 3 (c).)

“The term ‘airman’ means any individual (including the person in command and any pilot, mechanic, or member of the crew) who engages in the navigation of aircraft while under way, and any individual who is in charge of the inspection, overhauling, or repairing of aircraft.” (Sec. 9 (k).)

“It shall be unlawful \* \* \* to serve as an airman in connection with any aircraft registered as an aircraft of the United States \* \* \* without an airman certificate or in violation of the terms of any such certificate.” (Sec. 11 (a) (4).)

“Any person who violates any provision of subdivision (a) of this section \* \* \* shall be subject to a civil penalty of \$500.00.” (Sec. 11 (b).)

#### **Sec. 45. Application of the Law.**

For the purpose of this chapter, persons in command of or piloting licensed aircraft in flight will be classed as pilots.

#### **Sec. 46. Classification of Pilots.**

Licensed pilots are classed as commercial or private pilots. Commercial pilots are licensed as transport, limited commercial, industrial, or glider pilots. Private pilots are designated as private pilots (without other qualifications) or as student pilots. A person may hold a plurality of licenses, such as pilot’s and mechanic’s license. A transport pilot will not be issued other classes of pilot’s licenses.

#### **Sec. 47. Privileges and Restriction of Licensed Pilots.**

Except as otherwise provided in these regulations, the privileges conferred and restrictions imposed upon licensed pilots are as follows:

(A) Transport pilots may pilot any type of licensed aircraft, but shall not carry persons for hire in licensed aircraft other than in those types and within the classes specified in their license.

Transport pilots shall demonstrate their ability to navigate licensed aircraft of one or more of the classes set forth below. Such demonstration shall be to the satisfaction of the examiner for the Department of Commerce.

Class 1A. Gross weight not more than 3,500 pounds, single-engine, open cockpit.

Class 1B. Gross weight not more than 3,500 pounds, multiengine, open cockpit.

Class 1C. Gross weight not more than 3,500 pounds, single-engine, cabin.

Class 1D. Gross weight not more than 3,500 pounds, multiengine, cabin.

Class 2A. Gross weight between 3,500 and 7,000 pounds, single-engine, open cockpit.

Class 2B. Gross weight between 3,500 and 7,000 pounds, multiengine, open cockpit.

Class 2C. Gross weight between 3,500 and 7,000 pounds, single-engine, cabin.

Class 2D. Gross weight between 3,500 and 7,000 pounds, multiengine, cabin.

Class 3A. Gross weight over 7,000 pounds, single-engine, open cockpit.

Class 3B. Gross weight over 7,000 pounds, multiengine, open cockpit.

Class 3C. Gross weight over 7,000 pounds, single-engine, cabin.

Class 3D. Gross weight over 7,000 pounds, multiengine, cabin.

Transport pilots shall not pilot unlicensed aircraft carrying persons or property for hire.

(B) Limited commercial pilots shall have all of the privileges conferred and be subject to all of the restrictions imposed upon transport pilots, except they shall not, for hire, instruct students in the operation of aircraft in flight and they shall not pilot aircraft carrying persons for hire outside of the areas mentioned in their licenses, except they may be permitted to function as copilot on dual-controlled aircraft when accompanied by a transport pilot who is in command of and responsible for the operation of such aircraft,

but shall not credit such time as solo-flying experience.

(C) Industrial pilots may pilot any type of licensed aircraft not carrying persons for hire, but shall not pilot unlicensed aircraft carrying either persons or property for hire, and shall not, for hire, instruct students in the operation of aircraft in flight.

(D) Glider pilots may pilot any type of motorless aircraft, but shall not transport persons nor property, nor instruct students except in licensed motorless aircraft.

(E) Private pilots not designated as students may pilot licensed aircraft, but shall not carry persons or property for hire in licensed or unlicensed aircraft. Private pilots designated as students are licensed only for the purpose of piloting licensed aircraft, including gliders, when receiving flying instructions, and such student pilots shall not pilot licensed or unlicensed aircraft carrying persons or property for hire, and shall not pilot licensed aircraft for any other purpose than receiving flying instructions nor within any other area than that specified in their licenses. Private pilots shall not, for hire, instruct students in the operation of aircraft in flight.

#### **Sec. 48. Applications for Pilot's Licenses.**

An application for a pilot's license must be filed, under oath, with the Secretary of Commerce upon blanks furnished for that purpose. An applicant for a pilot's license, including a student's pilot license, must appear for a physical examination before a physician designated by the Secretary of Commerce and pass such examination, unless he is exempt under these regulations.

#### **Sec. 49. Character, Age, and Citizenship Qualifications.**

An applicant for a pilot's license must be of good moral character. The minimum age requirements are 14 years for glider pilots, 16 years for private pilots, and 18 years for industrial, limited commercial, and transport pilots. A glider or private pilot may be a citizen of any country. An individual, limited commercial, or transport pilot must be (1) a citizen of the United States, or (2) a citizen of a foreign country which grants reciprocal commercial-pilot privileges to citizens of the United States on equal terms and conditions with citizens of such foreign country, or (3) an alien who has filed his declaration of intention to become a citizen of the United States and advises the Secretary of Commerce of the serial number of such declaration, the date thereof, and the court in which filed. He must diligently and successfully prosecute the naturalization proceedings under penalty of the revocation of his pilot's license and from time to time must keep the Secretary of Commerce advised of the status of such proceedings. All applicants for pilots' licenses above the grade of private pilot shall be able to read, write, speak, and understand the English language.

#### **Sec. 50. Flying Experience Requirements.**

An applicant must have at least the following flying experience:

(A) TRANSPORT PILOTS. —Two hundred hours of solo flying, of which at least 5 hours must have been within the last preceding 60 days prior to the filing of the application.

(B) LIMITED COMMERCIAL PILOTS. —The same solo flying required of industrial pilots.

(C) INDUSTRIAL PILOTS. —Fifty hours of solo flying, of which at least 5 hours must have been within the last preceding 60 days prior to the filing of the application.

(D) GLIDER PILOTS. —No minimum flying experience.

(E) PRIVATE PILOTS. —Private pilots not designated as students, 10 hours solo flying, of which at least 2 hours must have been within the last preceding 60 days prior to the filing of the application. An applicant who is a graduate of an approved civilian school giving instruction in flying may be privileged to credit a portion of his dual and check time toward the solo flying experience above required, subject to the restrictions set forth in Aeronautics Bulletin No. 7-B (School Supplement), provided such applicant applies for license within 10 days from the date of graduation.

#### **Sec. 51. Pilot's Physical Qualification.**

The physical examinations provided for herein must be accomplished before the practical and theoretical tests will be given. The qualifications are as follows:

(A) PRIVATE PILOTS. —Absence of organic disease or defect which would interfere with safe handling of an airplane under the conditions of private flying; visual acuity of at least 20/40 in each eye; less than 20/40 may be accepted if the pilot wears a correction in his goggles bringing his vision approximately to

normal and has normal judgment of distance without correction (however, in the case of student pilots this will not apply, but if a student has 20/50 in one eye and 20/40 or better in the other, with normal judgment of distance, with correction, he may be accepted if his physical condition is satisfactory, and if his vision can be corrected approximately to normal by goggles); good judgment of distance; no diplopia in any position; normal visual fields and color vision; no organic disease of eye or internal ear.

(B) INDUSTRIAL PILOTS. —Absence of any organic disease or defect which would interfere with the safe handling of an airplane; visual acuity of not less than 20/30 in each eye, although in certain instances less than 20/30 may be accepted if the applicant wears a correction to 20/20 in his goggles and has good judgment of distance without correction; good judgment of distance; no diplopia in any field; normal visual fields and color vision; absence of organic disease of the eye, ear, nose, or throat.

(C) LIMITED COMMERCIAL PILOTS.—The same physical qualifications prescribed for transport pilots.

(D) TRANSPORT PILOTS. —Good past history; sound pulmonary, cardiovascular gastrointestinal, central nervous, and genitor-urinary systems; freedom from material structural defects or limitations; freedom from disease of the ductless glands; normal central, peripheral, and color vision; normal judgment of distance; only slight defects of ocular muscle balance; freedom from ocular disease; absence of obstructive or diseased conditions of the ear, nose, and throat; no abnormalities of equilibrium that would interfere with flying.

(E) GLIDER PILOTS. —The same physical qualifications prescribed for private pilots.

(F) WAIVERS. —In the case of trained, experienced flyers the Secretary of Commerce may grant waivers for physical defects designated as disqualifying by these regulations when, in his opinion, the experience of the pilot will compensate for the defect. A waiver once granted will hold indefinitely so long as the defect for which it was granted has not increased or unless canceled by the Secretary of Commerce.

## **Sec. 52. Exemption From Prescribed Physical Examination.**

An applicant for a pilot's license (or its renewal) may be exempt from the physical examination prescribed in these regulations upon filing with the Secretary of Commerce a certified copy of the examination for flying in the United States Army, Navy, or Marine Corps made within six months of the date of filing his application for his pilot's license or its renewal, provided his physical qualifications as shown by such copy of the examination are not less than those required by these regulations for the class of license for which he applies. Pilots licensed in a lower grade applying for a higher grade of license must submit a new satisfactory physical examination for the grade applied for unless the previous examination submitted was for the higher grade and, in the opinion of the Secretary of commerce, is of recent enough date to warrant exemption.

## **Sec. 53. Pilots' Examinations and Tests.**

Unless exempt under these regulations, candidates must pass the following examinations and tests:

(A) TRANSPORT PILOTS.—(1) Examination on the air-traffic rules and those portions of the Air Commerce Regulations pertaining to pilots' privileges and limitations and to the inspection and operation of aircraft.

(2) Practical and theoretical examination in elementary engine and plane mechanics and rigging and a theoretical examination in the fundamentals of meteorology and air navigation.

(3) Practical flight test, as follows:

(a) In addition to normal take-offs and landings, the following maneuvers will be required: From 1,500 feet, with engine throttled, make a 360° turn and land in normal landing attitude, by wheels touching ground in front of and within 200 feet of a line designated by examiner for the Department of Commerce.

(b) From 1,000 feet, with engine throttled, make 180° turn and land in normal landing attitude, by wheels touching ground in front of and within 200 feet of a line designated by examiner for the Department of Commerce.

(c) A series of five gentle and three steep figure 8 turns from 800 to 1,000 feet, respectively. Spiral in one direction from 2,000 feet, with engine throttled, and land in normal landing attitude by wheels touching ground in front of and within 200 feet of a line designated by examiner for the Department of Commerce.

(d) Fly in emergency maneuvers, such as spins, spirals, side slips, climbing turns, and recovering from stalls, and such others, as the Secretary of Commerce deems necessary.



(e) Fly over a triangular or rectangular course at least 100 miles, landing at place of take-off within five hours. This flight shall also include two obligatory landings, not at point of departure, when craft must come to rest. The course will be designated and the candidate will be furnished with route information by the examiner for the Department of Commerce at time of departure and the examiner for the Department of Commerce will determine whether the course was correctly followed and whether obligatory landings were satisfactory. Upon the presentation of satisfactory proof that the candidate has engaged in solo cross-country flights at a distance of at least 100 miles within one year preceding the date of his application the flight specified in this subsection will be omitted.

(f) Cross-wind landings and take-offs.

(B) LIMITED COMMERCIAL PILOTS. The same examinations and tests as are prescribed for transport pilots, except the cross-country flight and the examination on elementary meteorology and navigation.

(C) INDUSTRIAL PILOTS. —(1) Examination on the air-traffic rules and practical and theoretical examination in elementary engine and plane mechanics and rigging and those portions of the Air Commerce Regulations pertaining to pilots' privileges and limitations and to the inspection and operation of aircraft.

(2) The practical flight tests prescribed for transport pilots, except the distance for the cross-country flight shall be 60 miles.

(D) PRIVATE PILOTS. —(1) Examination on the air-traffic rules and those portions of the Air Commerce Regulations pertaining to pilots' privileges and limitations and to the inspection and operation of aircraft.

(2) The practical flight test specified in subparagraph 3 (c) of section 53 (A), except the landing must be made in front of and within 500 feet of a line designated by the examiner for the Department of Commerce, and three satisfactory landings. A private pilot, classed as a student, will be licensed without being required to pass the examination and tests prescribed in this subparagraph.

(E) GLIDER PILOTS. —In addition to normal take-offs and landings, a series of gentle and moderate banks, together with precision landings, will be required.

(F) REEXAMINATION. —Applicants for pilots' licenses who have failed to successfully accomplish the prescribed theoretical or practical tests may apply for reexamination at any time after the expiration of 90 days from the date of such failure.

If the physical examination has expired for the class of license for which application has been made, a new physical examination must be submitted.

The minimum passing grade for any subject in the foregoing theoretical examinations shall be 70 percent.

Practical tests must be accomplished to the satisfaction of the examiner for the Department of Commerce.

#### **Sec. 54. Place, etc., of Examinations.**

Examinations for pilots' licenses will be held at such times and places as the Secretary of Commerce shall designate. Such examinations and tests will be conducted by an examining officer, designated by the Secretary of Commerce. Candidates for pilots' licenses must furnish a commercially licensed airplane or one eligible for commercial license and in an airworthy condition, equipped with dual controls, in which the flight tests are to be made, unless the Secretary of Commerce makes other provisions therefor.

#### **Sec. 55. Duration and Renewal of Pilots' Licenses.**

(A) Unless sooner suspended or revoked, transport and limited commercial pilots' licenses shall remain in force for six months and industrial, glider, and private licenses one year from date of issuance. The Secretary of Commerce may, in his discretion, at any time require the holder of such license to undergo a reexamination in any of the theoretical or practical tests prescribed as prerequisites for the original license.

(B) Licenses may be renewed for like periods where the prescribed physical condition of the holder is shown by the same method as when the original license was issued, except that a transport or limited commercial pilot shall prove by a properly certified log book that he has had at least 10 hours of solo flying within the last six months in each of the classes for which he desires renewal. Industrial pilots shall have had at least 25 hours within the last year, glider pilots shall have made at least 10 gliding flights or 1 soaring flight of at least 1 hours' duration, and private pilots at least 10 hours within the last year, substantiated in the same manner as transport and limited commercial pilots.

(C) If an applicant for renewal applies within six months after the expiration of his last license, a renewal license may be issued to him upon proof of his physical qualifications and the passing of the flight tests required for the class of license for which renewal is requested.

(D) Upon 10 days' notice to and approval of the Secretary of Commerce the area for permissible flying of aircraft carrying passengers for hire designated in the license of limited commercial pilots may be changed to other areas.

(E) Upon application and for good cause shown the licenses specified in this chapter may be extended for 60 days.

#### **Sec. 56. Personal Possession of Pilots' Licenses.**

The pilot's license shall be kept in his personal possession when he is piloting aircraft and must be presented for inspection upon the demand of any passenger or any authorized official or employee of the Department of Commerce or State or municipal officials charged with enforcing local regulations or laws involving Federal compliance.

#### **Sec. 57. Pilots' Certified Log Books.**

A licensed pilot must keep an accurate record of his solo flying time in a log book in which the entries have been certified to and signed by him and attested by one of the following persons:

- (A) An official of an approved type airplane or engine manufacturing company.
- (B) An official of an approved flying school.
- (C) A contract United States air-mail operator.
- (D) A notary public.
- (E) A properly authorized operations officer for any military organization
- (F) Department of Commerce aeronautical inspectors.
- (G) Any officer of an organization engaged in the operation of aircraft when such officer has direct knowledge of the authenticity of the entries.

This log book shall contain the date of flight, the type of aircraft flown, the license or identification number of such aircraft, the type of engine, the duration of the flight, and the points between which such flight was made, and, in addition, when any flight results in serious damage to the aircraft, a notation to this effect shall be entered. This log book must be presented, upon demand, to any authorized representative of the Department of Commerce or State or municipal officer enforcing local regulations or laws involving Federal compliance.

#### **Sec. 58. Carrying Passengers in Various Classes of Airplanes.**

A licensed pilot authorized to transport passengers for hire shall not do so in a type of aircraft which he has not previously operated within the last preceding 90 days for at least two hours, except where he makes practice flights in such type for at least one-half hour, including 10 landings, 3 of which must have been to a full stop.

#### **Sec. 59. Seaplane Piloting.**

A licensed pilot shall not carry passengers for hire in a seaplane unless he has piloted a seaplane for at least two hours within the last preceding 90 days, except where he makes practice flights in the seaplane for at least one-half hour and takes it off and lands it at least ten times. At least three of the landings must be to a full stop.

#### **Sec. 60. Pilots' Night-Flying Qualifications.**

A transport or limited commercial pilot who has not had at least two hours of night solo flying within the last preceding 90 days shall not pilot aircraft carrying passengers, for hire, between one-half hour after sunset and one-half hour before sunrise, except where he takes off and lands between one-half hour after sunset and one-half hour before sunrise, at least ten times solo. At least three of such landings must be to a full stop.

#### **Sec. 61. Meaning of Solo Flying.**

As used in these regulations a person is engaged in solo flying when he is the sole operator of the controls and is in command of aircraft in flight. A copilot who is a licensed transport pilot may credit the time during which he is actually the sole manipulator of the controls, although he may not be in command of the aircraft.

**Sec. 62. Suspension or Revocation of Licenses.**

Pilots' licenses will be suspended or revoked for —

- (A) Violating any provision of the Air Commerce Act of 1926 or these regulations.
- (B) Carelessness or inattention to duty.
- (C) Unsound physical condition or any demonstration of incompetency in the operation or repair of aircraft.
- (D) Being under the influence or using or having personal possession of intoxicating liquor, cocaine, or other habit-forming drugs while on duty.
- (E) Refusal to exhibit license upon proper demand
- (F) Violating air-traffic rules.
- (G) Making any false statement in application for license or in any reports required to be submitted by these regulations.
- (H) Carrying passengers who are obviously under the influence of intoxicating liquor, cocaine, or other habit-forming drugs.
- (I) Piloting aircraft carrying passengers in excess of the number authorized in the aircraft license. Infants under 2 years of age are excepted, provided the maximum useful load is not exceeded.
- (J) Doing any act in connection with aircraft that is contrary to the public safety or interest or detrimental to the morale of pilots or mechanics.
- (K) Using or displaying license for any fraudulent purpose.

## CHAPTER 6

### LICENSING OF MECHANICS

#### **Sec. 63. Mechanics, Law of.**

“The Secretary of Commerce shall by regulation \* \* \* provide for the periodic examination and rating of airmen serving in connection with aircraft of the United States as to their qualifications for such service.” (Sec. 3 (c).)

“The term ‘airman’ means any individual (including the person in command and any pilot, mechanic, or member of the crew) who engages in the navigation of aircraft while under way, and any individual who is in charge of the inspection, overhauling, or repairing of aircraft.” (Sec. 9 (k).)

“It shall be unlawful \* \* \* to serve as an airman in connection with any aircraft registered as an aircraft of the United States \* \* \* without an airman certificate or in violation of the terms of any such certificate.” (Sec. 11 (a) (4).)

“Any person who violates any provision of subdivision (a) of this section \* \* \* shall be subject to a civil penalty of \$500.” (Sec. 11 (b).)

#### **Sec. 64. Application of the Law.**

For the purpose of this chapter, persons repairing or adjusting licensed aircraft in flight, and persons in charge of the ground inspection, overhauling, or repairing of licensed aircraft will be classed as mechanics. A workman or mechanic may engage in the repair or overhaul of licensed aircraft without being licensed if such repair or overhaul is in charge of a licensed mechanic. An application for a mechanic’s license must be filed, under oath, with the Secretary of Commerce upon blanks furnished for that purpose. An applicant for a mechanic’s license is not required to take a physical examination.

#### **Sec. 65. Classification of Mechanics.**

Mechanics are licensed as engine or airplane mechanics. A person may hold a plurality of licenses, such as both classes of mechanic’s licenses or a pilot’s and mechanic’s license.

#### **Sec. 66. Mechanics’ Qualifications and Examinations.**

(A) An applicant for an engine mechanic’s license must have had at least two years’ experience on internal-combustion engines, one year of which must have been on maintenance of aircraft engines. All applicants shall be able to read, write, speak, and understand the English language. Such applicant will be licensed upon passing an examination on Air Commerce Regulations pertaining to the operation and inspection of aircraft and showing that he has sufficient knowledge of such engines and their accessories, including ignition systems, to properly inspect, maintain, repair, and overhaul the same.

(B) An applicant for an airplane mechanic’s license must have had at least one year’s actual experience in building or maintaining or repairing aircraft. Such an applicant will be licensed upon passing an examination on Air Commerce Regulations pertaining to the operation and inspection of aircraft, showing he is sufficiently qualified in plane structure and rigging, including control systems, to properly inspect, maintain, repair, and overhaul the same.

(C) The examinations for both classes of license will be both theoretical and practical. The minimum passing grade in each subject covered shall be 70 percent. A citizen of any country may be licensed if found qualified. Examinations for mechanic’s licenses will be held at such times and places as the Secretary of Commerce shall designate. Such examinations and tests will be conducted by an examining officer designated by the Secretary of Commerce.

(D) Applicants for mechanic’s licenses who have failed to successfully accomplish the prescribed theoretical or practical tests may apply for reexamination at any time after the expiration of 90 days from the date of such failure.

#### **Sec. 67. Duration and Renewal.**

Mechanics’ licenses, unless sooner suspended or revoked, will remain in force for two years after date of issue and will be renewed for additional 2-years after date of issue and will be renewed for additional 2-year periods upon proof that during the term of the last license the holder has rendered services under his

license during at least one-half of the term thereof. Upon application and good cause shown the Secretary of Commerce may extend the license for a period of not more than 60 days. The Secretary of Commerce may, in his discretion, require the holder of such license at any time to undergo a reexamination in any of the theoretical or practical tests prescribed as requisites for the original license.

**Sec. 68. Personal Possession of Mechanics' Licenses.**

A mechanic's license shall be kept in his personal possession when he is serving in connection with licensed aircraft and must be presented for inspection upon the demand of any passenger in or owner of repaired licensed aircraft upon which such mechanic has worked, or any authorized official or employee of the Department of Commerce or State or municipal officials charged with enforcing local regulations or laws involving Federal compliance.

**Sec. 69. Suspension or Revocation of Licenses.**

Mechanics' licenses will be suspended or revoked for—

- (A) Violating any provision of the Air Commerce Act of 1926 or these regulations.
- (B) Carelessness or inattention to duty.
- (C) Any demonstration of incompetency in the repair or overhaul of aircraft.
- (D) Being under the influence or using or having personal possession of intoxicating liquor, cocaine, or other habit-forming drugs while on duty.
- (E) Refusal to exhibit license upon proper demand.
- (F) Making any false statement in application for license or in any reports required to be submitted by these regulations.
- (G) Doing any act in connection with aircraft, which is contrary to the public safety or interest or detrimental to the morale of pilots or mechanics.
- (H) Using or displaying license for any fraudulent purpose.

## CHAPTER 7

### AIR-TRAFFIC RULES

#### **Sec. 70. Law.**

“The Secretary of Commerce shall by regulation establish air traffic rules for the navigation, protection, and identification of aircraft, including rules as to safe altitudes of flight and rules for the prevention of collisions between vessels and aircraft.” (Air-commerce act of 1926, sec. 3 (e).)

#### **Sec. 71. Unlawful Acts.**

“It shall be unlawful \* \* \* to navigate any aircraft otherwise than in conformity with the air-traffic rules.” (Sec. 11 (a) (5).)

#### **Sec. 72. Penalty.**

“Any person who violates any provision of subdivision (a) of this section \* \* \* shall be subject to a civil penalty of \$500.” (Sec. 11 (b).)

#### **Sec. 73. Application of the Law.**

“In order to protect and prevent undue burdens upon interstate and foreign air commerce the air-traffic rules are to apply whether the aircraft is engaged in commerce or noncommercial or in foreign, interstate, or intrastate navigation in the United States, and whether or not the aircraft is registered or is navigating in a civil airway.” (Statement of managers accompanying conference report, air-commerce act of 1926.)

#### **Sec. 74. Flying Rules.**

(A) **RIGHT-SIDE TRAFFIC.**—Aircraft flying in established civil airways, when it is safe and practicable, shall keep to the right side of such airways.

(B) **GIVING-WAY ORDER.**—Craft shall give way to each other in the following order:

(1) Airplanes.

(2) Airships.

(3) Balloons, fixed or free.

An airship not under control is classed as a free balloon. Aircraft required to give way shall keep a safe distance, having regard to the circumstances of the case. Three hundred feet will be considered a minimum safe distance.

(C) **GIVING-WAY DUTIES.** —If the circumstances permit, the craft which is required to give way shall avoid crossing ahead of the other. The other craft may maintain its course and speed, but no engine-driven craft may pursue its course if it would come within 300 feet of another craft, 300 feet being the minimum distance within which aircraft other than military aircraft of the United States engaged in military maneuvers and commercial aircraft engaged in local industrial operations may come within proximity of each other in flight.

(D) **CROSSING.** —When two engine-driven aircraft are on crossing courses, the aircraft that has the other on its right side shall keep out of the way.

(E) **APPROACHING.**—When two engine-driven aircraft are approaching head-on, or approximately so, and there is risk of collision, each shall alter its course to the right, so that each may pass on the left side of the other. This rule does not apply to cases where aircraft will, if each keeps on its respective course, pass more than 300 feet from each other.

(F) **OVERTAKING.**—(1) *Definition.*—An overtaking aircraft is one approaching another directly from behind or within 70° of that position, and no subsequent alteration of the bearing between the two shall make the overtaking aircraft a crossing aircraft within the meaning of these rules or relieve it of the duty of keeping clear of the overtaken craft until it is finally past and clear.

(2) *Presumption.*—In case of doubt as to whether it is forward or aft of such position, it should assume that it is an overtaking aircraft and keep out of the way.

(3) *Altering course.*—The overtaking aircraft shall keep out of the way of the overtaken aircraft by altering its own course to the right and not in the vertical plane.

(G) **HEIGHT OVER CONGESTED AND OTHER AREAS.**—Exclusive of taking off from or landing on an established landing field, airport, or on property designated for that purpose by the owner, and except as

otherwise permitted by section 79, aircraft shall not be flown—

(I) Over the congested parts of cities, towns, or settlements, except at a height sufficient to permit of a reasonably safe emergency landing, which in no case shall be less than 1,000 feet.

(2) Elsewhere at height less than 500 feet, except where indispensable to an industrial flying operation.

(H) HEIGHT OVER ASSEMBLY OF PERSONS.—No flight under 1,000 feet in height shall be made over any open-air assembly of persons except with the consent of the Secretary of Commerce. Such consent will be granted only for limited operations.

(I) ACROBATIC FLYING.—(1) Acrobatic flying means intentional maneuvers not necessary to air navigation.

(2) No person shall acrobatically fly an aircraft —

(a) Over a congested area of any city, town, or settlement.

(b) Over any open-air assembly of persons or below 2,000 feet in height over any established civil airway, or at any height over any established airport or landing field, or within 1,000 feet horizontally thereof.

(c) Any acrobatic maneuvers performed over any other place shall be concluded at a height greater than 1,500 feet.

(d) No person shall acrobatically fly any airplane carrying passengers for hire.

(e) When performing acrobatics not prohibited by these regulations each person in the aircraft must be properly equipped with a parachute of a type and design which has been tested and approved by a competent agency of the United States Government.

(f) *Dropping objects or things.*—When an aircraft is in flight the pilot shall not drop or release, or permit any person to drop or release, any object or thing which may endanger life or injure property, except when necessary to the personal safety of the pilot, passengers, or crew. The discharge of human waste from aircraft in flight is also prohibited.

(J) SEAPLANES ON WATER.—Seaplanes on the water shall maneuver according to the laws and regulations of the United States governing the navigation of water craft, except as otherwise provided herein.

(K) TRANSPORTING EXPLOSIVES.—The transporting of any explosives other than that necessary for signaling or fuel for such aircraft while in flight or materials for industrial and agricultural spraying (dusting) is prohibited, except upon special authority obtained from the Secretary of Commerce.

(L) No person shall navigate aircraft while under the influence of, using, or having personal possession of intoxicating liquor, cocaine, or other habit-forming drugs while on duty, nor shall such person carry passengers who are obviously under the influence of intoxicating liquor, cocaine, or other habit-forming drugs.

#### **Sec. 75. Take-off and Landing Rules.**

(A) METHOD.—Take-offs and landings shall be made upwind when practicable. The take-off shall not be commenced until there is no risk of collision with landing aircraft. Aircraft when taking off or landing shall observe the traffic lanes indicated by the field rules or signals. No take-off or landing shall be made from or on a public street or highway without the prior consent of the local governing authority and the approval of the Secretary of Commerce.

(B) COURSE.—If practicable, when within 1,000 feet horizontally of the leeward side of the landing field the airplane shall maintain a direct course toward the landing zone.

(C) RIGHT OVER GROUND PLANES.—A landing plane has the right of way over planes moving on the ground or taking off, but this shall not excuse the pilots of either or both such aircraft from the exercise of due care and diligence.

(D) GIVING WAY.—When landing and maneuvering in preparation to land, the airplane at the greater height shall be responsible for avoiding the airplane at the lower height and shall, as regards landing, observe the rules governing overtaking aircraft.

(E) DISTRESS LANDING.—An aircraft in distress shall be given free way in attempting to land.

#### **Sec. 76. Lights.**

(A) ANGULAR LIMITS.—The angular limits laid down in these rules will be determined as when the aircraft is in normal flying position.

(B) AIRPLANE LIGHTS.—Between one-half hour after sunset and one-half hour before sunrise airplanes in flight must show the following lights:

(1) On the right side a green light and on the left side a red light, each showing unbroken light between two vertical planes whose dihedral angle is 110° when measured to the left and right, respectively, from dead ahead. These lights shall be visible at least 2 miles.

(2) At the rear and as far aft as possible a white light shining rearward, visible in a dihedral angle of 140° bisected by a vertical plane through the line of flight and visible at least 3 miles.

(C) AIRSHIP LIGHTS.—Between one-half hour after sunset and one-half hour before sunrise airships shall carry and display the same lights that are prescribed for airplanes, excepting the side lights shall be doubled horizontally in a fore-and-aft position and the rear light shall be doubled vertically. Lights in a pair shall be at least 7 feet apart.

(D) BALLOON LIGHTS.—A free balloon, between one-half hour after sunset and one-half hour before sunrise, shall display one white light not less than 20 feet below the car, visible for at least 2 miles. A fixed balloon, or airship, shall carry three lights—red, white, and red—in a vertical line, one over the other, visible at least 2 miles. The top red light shall be not less than 20 feet below the car, and the lights shall be not less than 7 nor more than 10 feet apart.

(E) LIGHTS WHEN STATIONARY.—(1) Between one-half hour after sunset and one-half hour before sunrise all aircraft which are on the surface of water and not under control, or which are moored or anchored in navigation lanes, shall show a white light visible for at least 2 miles in all directions.

(2) Balloon and airship mooring cables between one-half hour after sunset and one-half hour before sunrise shall show groups of three red lights at intervals of at least every 100 feet, measured from the basket, the first light in the first group to be approximately 20 feet from the lower red balloon light. The object to which the balloon is moored on the ground shall have a similar group of lights to mark its position.

#### **Sec. 77. Day Marks of Masts, etc.**

By day, balloon and airship mooring cables shall be marked with tubular streamers not less than 8 inches in diameter and 7 feet long and marked with alternate bands of white and red 20 inches in width. The object to which the balloon or airship is moored on the ground shall have the same kind of streamers, which must be in the same position as the lights specified herein.

#### **Sec. 78. Signals.**

(A) DISTRESS.—The following signals, separately or together, shall, where practicable, be used in case of distress:

(1) The international signal, S O S, by radio.

(2) The international code flag signal of distress, NC.

(3) A square flag having either above or below it a ball or anything resembling a ball.

(B) SIGNAL WHEN COMPELLED TO LAND.—When an aircraft is forced to land at night at a lighted airport it shall signal its forced landing by making a series of short flashes with its navigation lights if practicable to do so.

(C) FOG SIGNALS.—In fog, mist, or heavy weather an aircraft on the water in navigation lanes, when its engines are not running, shall signal its presence by a sound device emitting a signal for about five seconds in 2-minute intervals.

#### **Sec. 79. Deviation From Air-Traffic Rules.**

The air-traffic rules may be deviated from when special circumstances render a departure necessary to avoid immediate danger or when such departure is required because of stress of weather conditions or other unavoidable cause.



## CHAPTER 8

### MISCELLANEOUS

#### **Sec. 80. Civil Penalties.**

“Any person who (1) violates any provision of subdivision (a) of this section or any entry or clearance regulation made under section 7, or (2) any customs or public-health regulation made under such section, or (3) any immigration regulation made under such section, shall be subject to a civil penalty of \$500, which may be remitted or mitigated by the Secretary of Commerce, the Secretary of the Treasury, or the Secretary of Labor, respectively, in accordance with such proceedings as the Secretary shall by regulation prescribe \* \* \* .” (Air-commerce act of 1926, sec. 11 (b).)

#### **Sec. 81. Penalty Proceedings.**

The Secretary of Commerce, or his duly authorized representative, will notify all persons of the incursion of penalties subject to mitigation or remission by the Secretary, and any person charged with a civil penalty may transmit to the Secretary of Commerce, within the time prescribed in the notification of such penalty, an affidavit stating the facts upon which the request for mitigation or remission is based. The Secretary of Commerce will then determine whether or not the penalty will be mitigated or remitted, and the person making the request will be notified accordingly.

#### **Sec. 82. Waiver of Regulations.**

The Secretary of Commerce, Assistant Secretary of Commerce for Aeronautics, or the Director of Aeronautics may waive any of the requirements of these regulations when, in their discretion, the particular facts justify such waiver.

#### **Sec. 83. Savings Clause.**

An aircraft required to be licensed under the Air-commerce act of 1926 may operate under a letter of authority from the Secretary of Commerce or his duly authorized representative pending the official inspection of such aircraft, provided an application for aircraft license is on file with the Secretary of Commerce and all the provisions of these regulations have been complied with.

In so far as these regulations amend the existing regulations they shall become effective on September 1, 1929, except as to section 9, which shall become effective on July 1, 1929, and section 47, which shall become effective upon original application or first request for renewal of license after September 1, 1929.